4/5/89 C3950-1

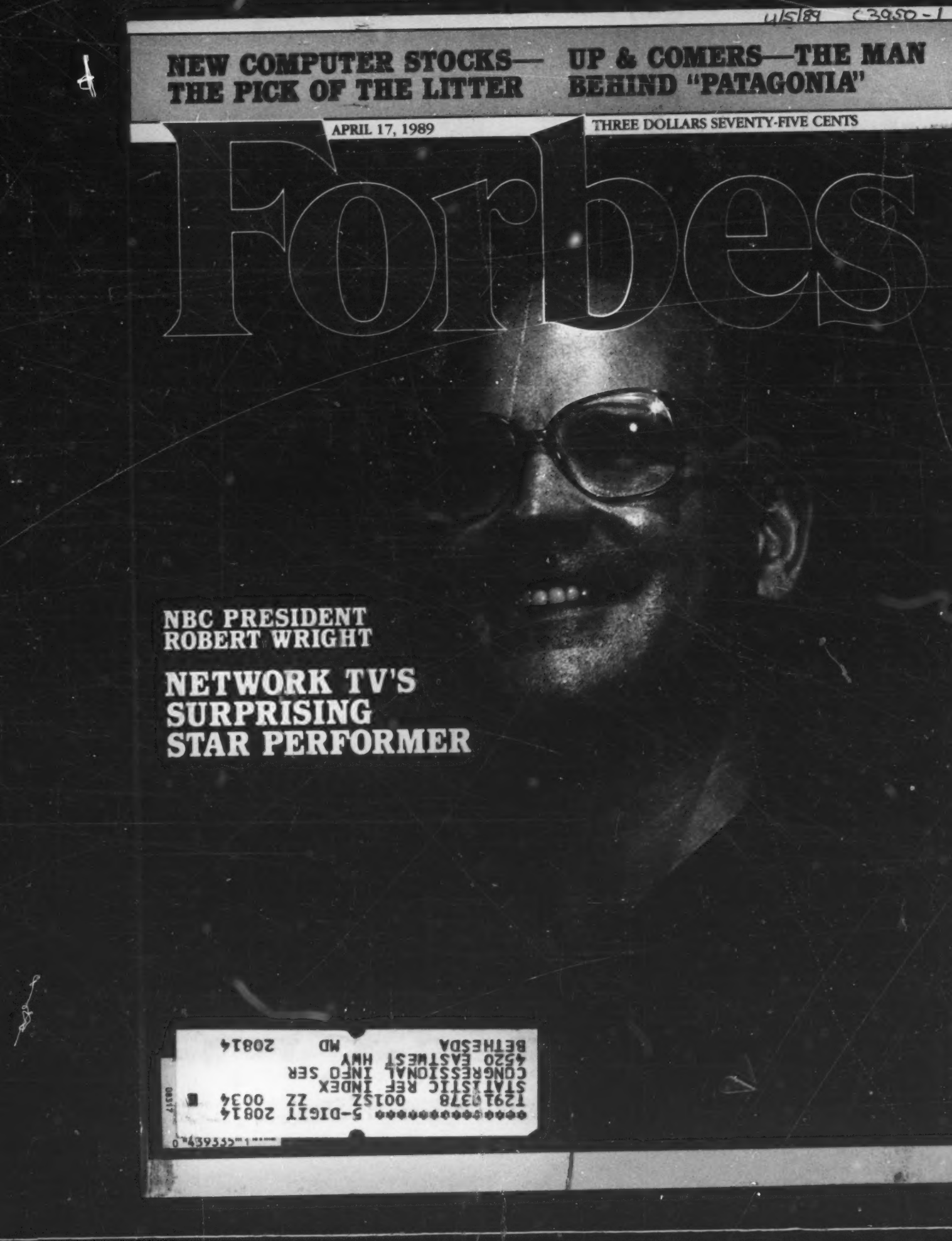
NEW COMPUTER STOCKS— THE PICK OF THE LITTER

UP & COMERS—THE MAN BEHIND "PATAGONIA"

APRIL 17, 1989

THREE DOLLARS SEVENTY-FIVE CENTS

Forbes



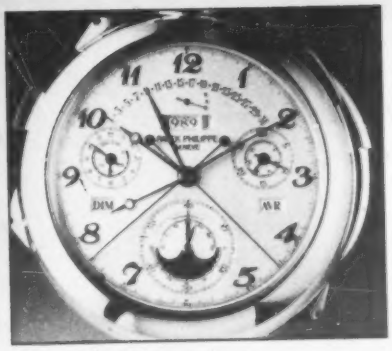
NBC PRESIDENT ROBERT WRIGHT

NETWORK TV'S SURPRISING STAR PERFORMER

5-DIGIT 20814
00152 ZZ 0034
12910378
STATISTIC REF INDEX
CONGRESSIONAL INFO SER
4520 EASTWEST HWY
BETHESDA MD 20814

Cover photo by J.B. Diederich/Contact

124



46 *The Philippe mystique*

60 *Carpetman*

APRIL 17, 1989
VOLUME 143
NUMBER 8

THE EDITORIAL INDEX OF COMPANIES REFERRED TO IN THIS ISSUE IS ON PAGES 6 AND 7.

COVER STORY

124 The Man From GE
By Dyan Machan
Is show business different from other businesses? Bob Wright's experience at NBC suggests that it really isn't.

COMPANIES

46 Patek Philippe S.A.
By John Marcom Jr.
Why people pay $5,000 for an old-fashioned mechanical watch.

49 Delta Woodside Industries
By Ronit Addis
How two men built a textile company by buying unloved assets.

60 Interface, Inc.
By Alyssa A. Lappen
A carpet company with 45% of a world market.

73 Albertson's
By Marc Beauchamp
Sixth in sales, first in net income.

88 O'Brien Energy Systems
By James Cook
Frank O'Brien's cogeneration business. The payoff is in sight.

94 Prospect Group
By Marcia Berss
A publicly traded LBO play.

98 J.G. Boswell Co.
By Ralph King Jr.
The biggest and most prosperous agriculture operation in the U.S.

108 First Executive Corp.
By John Heins
Fred Carr is taking a lot of heat, but he has never minded a bit of heat.

140 The Up & Comers: GoodMark Foods, Inc.
By Patrice Duggan
A meat snack middle manager puts up $50,000 and ends up with $19 million.

148 The Up & Comers: The Man Behind "Patagonia"
By Fleming Meeks
He works only six months a year, but he knows how to innovate.

154 Thorn EMI
By Lisa Gubernick
Colin Southgate puts it back on track.

LABOR AND MANAGEMENT

90 Attila The Executive
By Joe Queenan
Any wonder U.S. industrialists are ailing? Look at the garbage they read.

92 Trouble At Mazda?
By Jerry Flint
There are quality circles, and then there are line speedups.

THE ECONOMY

86 No Recession—Yet
By Ronald Bailey
Saul Hymans uses a computer and 172 equations. It beats astrology.

INTERNATIONAL

40 The Bulgarian Connection
By Peter Fuhrman
A Marxist dictator assists some big-time drug dealers.

110 Who Sets The Standards?
By John R. Hayes
One reason for trade deficits.

114 Brain Drain In Reverse
By Andrew Tanzer
Taiwanese engineers go home.

118 More Free Trade?
By Edwin A. Finn Jr.
Georgetown Professor Gary Hufbauer says the time is ripe.

GOVERNMENT

169 Small Business Administration
By Richard Behar and Christie Brown
The billion-dollar rat hole.

INVESTING

44 Global Electronic Exchange
By Richard L. Stern with William Heuslein
Why are the Big Board and Nasdaq fighting the future?

56 Israeli Banks On The Block
By Matthew Schifrin
Want to buy a large international bank for book value or less?

106 Pyramid Scheme
By William P. Barrett
Wherein Islamic investment companies promised 36% annual returns.

116 A University's Gamble
By Dana Wechsler
Boston University poured tens of millions into a biotech startup.

104 *Nice guys at the IRS?*

148 *The outdoor image*

200 *Chile skiing*

128 Real Estate
By Howard Rudnitsky
The art of a Trump deal.

129 The Financial Planner Index
By Joe Queenan
When advertisers hawk a product to financial planners, steer clear.

214 Funds For Tightwads
By Evan McGlinn
Could it be that investors are starting to notice fees and overhead costs?

216 Statistical Spotlight
By Christopher Palmeri
Uncertain or unstable earnings forecasts mean opportunity for investors. Also: Growing yields.

236 Streetwalker
Ryder; Santa Fe Southern Pacific; Martin Marietta; Donnelley; SNET.

ISSUES

68 Farmer Income
By Rick Reiff
When farmers prosper, you don't see them on the evening news.

80 Ethical Shopping
By Joe Queenan
What do you do if your favorite peanut butter is insensitive to women?

TAXING MATTERS

104 A Question Of Timing
By Laura Saunders
In closing one corporate tax loophole, the IRS opened a much larger one.

COMPUTERS/COMMUNICATIONS

172 Sprechen Sie High Tech?
By Norm Alster
Why foreign buyers love U.S. technology companies.

178 Cadence Design Systems
By Kathleen K. Wiegner
Portability plays into its hands.

180 New Computer Stocks—The Pick Of The Litter
By Richard A. Shaffer
A preview of 1989 offerings.

186 As I See It: Mark Stahlman
By George Gilder
Computers as an emerging industry.

SCIENCE & TECHNOLOGY

193 Welding
By Gary Slutsker
Why General Motors is interested in carbon dioxide lasers.

MARKETING

136 The Return Of "The Sponsor"
By Deirdre Fanning
Advertisers are once again producing television shows.

196 Drip, Drip, Drip . . . Drip
By Joshua Levine
Maxwell House fights for a comeback.

PERSONAL AFFAIRS

200 A Midsummer Ski Vacation?
By James W. Michaels
Summer skiing in Chile. Also: Tennis elbow; preventing car theft.

DEPARTMENTS

8 Side Lines
14 Follow-Through
16 The Informer
18 Readers Say
21 Fact and Comment
26 Other Comments
29 Fact and Comment II
33 Commentary
239 Flashbacks
240 Thoughts

COLUMNISTS

76 Michael Novak
225 Ben Weberman
226 David Dreman
228 Ann C. Brown
230 Mark Hulbert
232 David A. Levy

MONEY & INVESTMENTS

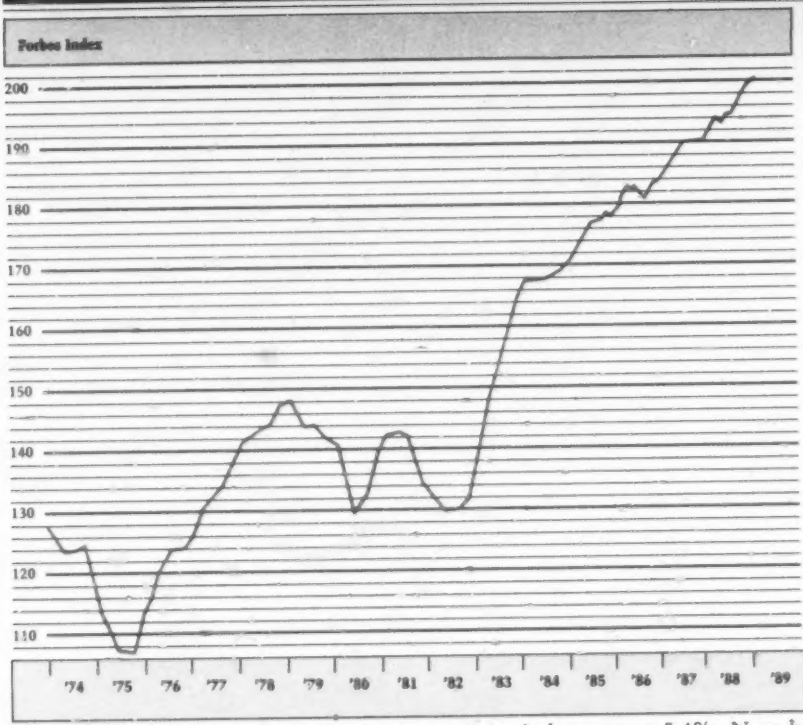
35 What's Ahead For Business
36 The Forbes Index
211 The Forbes/Wilshire 5000 Review

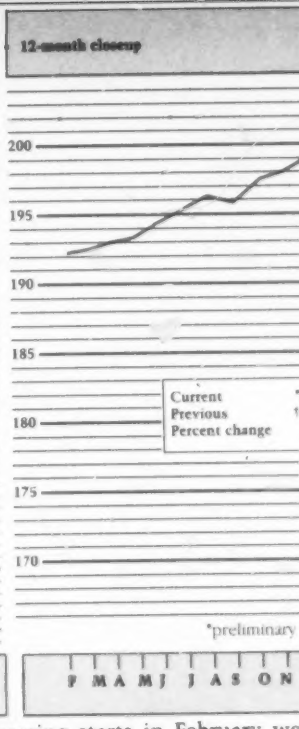
FACES BEHIND THE FIGURES

208 Alvaro Umaña
Costa Rican Minister of Natural Resources
208 Marvin Markus
Kidder, Peabody
209 George Keane
Endowment Advisers
209 Robert Burns
Regent International Hotels

April 17, 1989 Volume 143 Number 8 Forbes (ISSN 0015 6914) is published biweekly except weekly during two weeks in October, by Forbes Inc., 60 Fifth Ave., New York, N.Y. 10011. Second-class postage paid at New York, N.Y. and at additional mailing offices. Canadian second-class postage paid, permit number 9490. Subscription $48 a year, U.S.A. Postmaster: Send address changes to Forbes, 60 Fifth Ave., New York, N.Y. 10011. Copyright © 1989 Forbes Inc. Title protected through a trademark registration in the U.S. Patent Office.

The Forbes Index





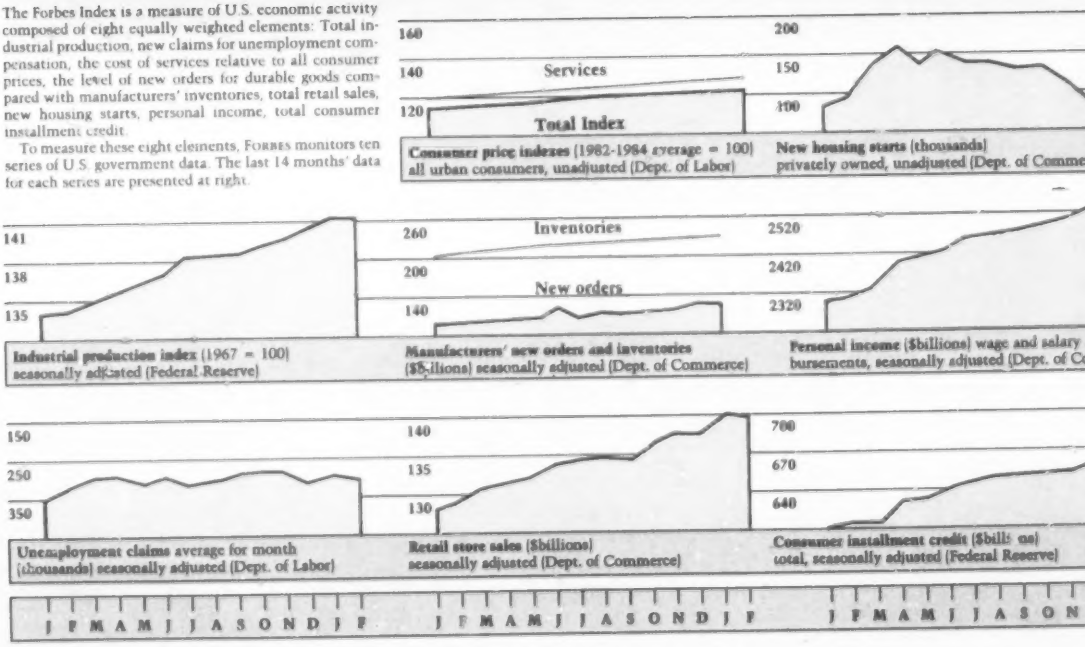
Economic signals turn yellow. The Consumer Price Index, up 0.5% in January, edged up 0.4% in February. But the wholesale price index jumped an alarming 1% in both months. Short-term interest rates are now at their highest level in four years. The unemployment rate dropped 0.3% in February, but initial claims for unemployment benefits rose 5.4%. New housing starts in February we lower than they were a year ago.

The final figure for last year's gross national pr $4,033 billion in 1982 dollars. In the fourth qu 1988 the gross national product expanded at ar rate of 2.4%, against 6.1% in the fourth quarter

The Forbes Index Components

The Forbes Index is a measure of U.S. economic activity composed of eight equally weighted elements: Total industrial production, new claims for unemployment compensation, the cost of services relative to all consumer prices, the level of new orders for durable goods compared with manufacturers' inventories, total retail sales, new housing starts, personal income, total consumer installment credit.

To measure these eight elements, FORBES monitors ten series of U.S. government data. The last 14 months' data for each series are presented at right.


160
140
120
Services
Total Index
Consumer price indexes (1982-1984 average = 100) all urban consumers, unadjusted (Dept. of Labor)
200
150
100
New housing starts (thousands) privately owned, unadjusted (Dept. of Comme
141
138
135
Industrial production index (1967 = 100) seasonally adjusted (Federal Reserve)
260
200
140
Inventories
New orders
Manufacturers' new orders and inventories ($billions) seasonally adjusted (Dept. of Commerce)
2520
2420
2320
Personal income ($billions) wage and salary bursements, seasonally adjusted (Dept. of C
150
250
350
Unemployment claims average for month (thousands) seasonally adjusted (Dept. of Labor)
140
135
130
Retail store sales ($billions) seasonally adjusted (Dept. of Commerce)
700
670
640
Consumer installment credit ($billions) total, seasonally adjusted (Federal Reserve)
J F M A M J J A S O N D J F
J F M A M J J A S O N D J F
J F M A M J J A S O N

"hollowing out" scenario that ends with cheap Third World textiles and other manufactured goods swamping an impotent U.S. industry.

Even the company's video presentation parodies the textile pessimists. The camera opens with a shot of a coffin labeled "American Textiles," and follows a hearse around the cemetery—the announced demise of the industry, the film is saying, is greatly exaggerated.

"We Americans don't recognize that we are very highly competitive manufacturers," says Rainsford, "and our textile industry is one of the most modern industries in America."

As Delta Woodside grew, Rainsford and Maddrey invested in upgrading old equipment and buying new machines. It also vertically integrated, adding several yarn and combing plants to reduce its dependence on outside suppliers and to make itself more immune to cycles.

But the partners did not add corporate bureaucrats. Besides Maddrey and Rainsford, Delta Woodside has one other corporate executive, plus a few administrators and a treasurer. When a vice president left last year, he was not replaced. His duties were farmed out among the other officers.

This devotion to a few hands at the top has a corollary—maximum autonomy for division heads and plant managers. "I don't know what price they're selling at and who they're selling to today," says Maddrey, "but we know whether they are selling enough goods to meet the plan."

In the stock market, Delta Woodside has been something of a disappointment. The company now has solid earnings and a reasonable long-term debt-to-equity ratio of 43%. But after going public at $14, the shares now trade at 12¼ on the New York Stock Exchange—just 8 times trailing earnings. The median multiple for textile companies is 12. The company's thin float probably hurts: Maddrey and Rainsford own 20% of the 18.6 million shares each, making each of them worth about $45 million. Another company, RSI Corp., which sells office supplies and outdoor equipment and is controlled by Buck Mickel, owns another 40%. RSI's own shares trade over-the-counter at 10½, around 16 times earnings, giving investors another way to buy Delta Woodside's stock. Last month Delta Woodside and RSI announced plans to merge into a single public company later this year.

Inevitably, Rainsford and Maddrey have become victims of their own success. By showing how profitable well-managed U.S. textile assets can be, they have raised the prices others are willing to pay for them. Last year, as Burlington Industries and J.P. Stevens were sold off in bits and pieces, Delta Woodside didn't even nibble because of the high prices. So a piece they particularly wanted, Burlington's European operations, got away.

Unwilling to pay what they consider to be uneconomic prices, Rainsford and Maddrey say they will expand from within. They're thinking of increasing the size of their small sewing plant in Costa Rica, and of selling specialty fabrics to Europe.

"Our biggest challenge is making sure that we keep our patience," says Maddrey. "Some of these businesses are being sold at too high a price, and we think that's going to come back to haunt them. That may also open opportunities for us." Going against the grain built this company, Maddrey is saying, and avoiding fads will keep it growing. ■

Want to buy a large international bank for book value or less? Check out Israel's big banks. They may soon be on the block.

"If I were a rich man . . ."

By Matthew Schifrin

AT THE RIGHT PRICE, these will be a great buy. They have lots of assets and enormous earnings potential." The speaker is Shimon Topor, a partner at the New York-based investment firm Steinhardt Partners. Steinhardt is one of several sophisticated investment firms that are lining up for an opportunity most investors are yet to hear of: the coming fire sale of Israel's largest banking institutions.

Brian Hendler/Picture Group

Bank Hapoalim's main branch in Jerusalem
Beneath heavy loan losses, an investment opportunity?

Come and get 'em

The Israeli government wants to sell $77 billion in bank assets. Large loan losses will hurt 1989's results. But under the layer of bad debts lie some interesting investment opportunities.

Bank	Assets ($bil)	Book value ($mil)	Controlling group	Controlling group's % equity	% voting rights
Bank Hapoalim	$30.6	$967	Histadrut	0.1%	50%
Bank Leumi	24.4	1,079	World Zionist Organization	2.0	75
IDB Bankholding	14.0	539	Recanati family	10.0	30
United Mizrahi Bank	6.6	224	World Mizrahi Organization	0.003	50
Union Bank of Israel	1.5	70	Bank Leumi	42.0	75

Sources: MI Holdings, Israel; banks. Israeli Banking Today, *published by Jerusalem Post.*

Big U.S. investors may soon be invited to take a look at some of Israel's best-known banks because few plausible buyers exist in Israel itself. Preparation for the auction is strong evidence that the Israeli government will soon begin to do what it has long talked about—get more major businesses into private hands.

The government plans to do that, over the next five years, by privatizing some 30 state-owned enterprises. Included in the offerings will be major banks. The proceeds will be used to reduce domestic debt.

How did the Israeli banks wind up in government hands in the first place? The story begins in October of 1983, when a scandalous bank-orchestrated runup in banking shares collapsed, leaving speculators with shattering losses.

To avert financial disaster following the collapse, the government promised to bail out shareholders by redeeming their shares at superinflated, precrash levels—well over two times book value. Redemption of the shares would take place by the issuance of some $7 billion in government-guaranteed notes. The government would then give the founders of the banks—entities like the Histadrut labor union, which controls Bank Hapoalim—until 1993 to buy the shares back, but only at the precrash prices the government had paid.

Since the shares were never worth anything near that, the founders have made it known to the authorities that they have absolutely no intention of buying them back at those highly inflated levels. So the government is preparing to auction them off.

The politically powerful Histadrut and other founders much prefer the status quo, of course. They are counting on the fact that at present the stocks would seem to have limited investment appeal. That's because, ironically, actual voting control of the banks still resides with none other than their founders.

This bizarre situation traces back to the banks' origins but was aggravated in the precrash bubble, when the banks floated enormous amounts of nonvoting equity shares—the same shares the government now owns—to cash in on fast-rising stock prices. Result: Original owner Histadrut today holds only 0.1% of Bank Hapoalim's equity but still controls 50% of the bank's voting shares *(see table)*.

But chances are slim that the government will abide the status quo. Bills now moving through the Knesset could equalize the inequities by simply requiring that all banking shares get one vote. This would effectively strip the founders of their control. The betting in Israel is that legislation along these lines is inevitable.

Once the banks do go on the auction block, perhaps before the end of this year, investors will be presented with some interesting opportunities.

On the surface the banks appear deeply troubled because of mounting loan losses connected to deep-rooted problems in the Israeli economy. Losses in the agricultural and manufacturing sectors alone are expected to cost Bank Hapoalim at least $500 million in writedowns this year. Says Amir Barnea, an Israeli banking expert at the University of Wisconsin, "The Israeli banks are in a situation similar to the U.S. money center banks in 1986, when they took large writedowns for Third World debt."

But beneath the layer of bad debts, for which reserves are being aggressively built, Israeli banks' profitability has been improving since 1986. In 1987 the major Israeli banks had inflation-adjusted returns on equity of around 10.5%, compared with 8.3% for U.S. banks on average. In 1988 Israeli banks should do much worse because of large loan losses.

The banks have benefited from strong government measures that have kept inflation below 20% since late 1985. This relative stability, plus a reasonably healthy economy, has caused booming demand for shekel-denominated deposits and loans. That, coupled with a cut in bank taxes, has produced loan profit margins of 12% annually for the banks.

Another plus for potential investors is the huge number of bank subsidiaries that span the whole of the Israeli economy. Thus, an investment in Bank Hapoalim or in IDB Bankholding Corp. is an investment in Clal (Israel) Ltd., one of the country's largest and most profitable entities, with interests ranging from insurance and brokerage services to textiles.

Separately, Hapoalim owns Ampal-American, an Amex-listed company with interests in Israeli hotels and other real estate. IDB, too, has U.S. investments, including an 82% stake in Israel Discount Bank of New York, a $4 billion (assets) New York commercial bank. For non-U.S. investors, control of these Israeli banks could thus mean easier access to U.S. markets, considering Israel's free trade agreement with the U.S. Says Leonard Shaykin, New York financier and owner of the *Chicago Sun Times*, "At the right price and under the right management, these banks are very interesting opportunities."

What price is right? In preparation for an auction, five Israeli investment firms, two aided by First Boston and Merrill Lynch, have been retained by the Israeli government to figure it out. Unlike U.S. bank financial statements, Israeli financial statements are all adjusted for inflation, so all other things being equal, profitability and book value figures could be understated relative to those of U.S. banks. Anyone thinking about a bid, of course, will be doing his own digging. The Finance Ministry has been fielding queries since late 1988.

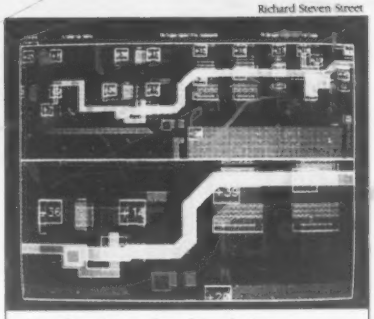
The first Israeli bank to be auctioned off will likely be $1.5 billion Union Bank of Israel, 42% owned (but 75% controlled) by Bank Leumi. Union has a book value of around $70 million. Because of its position as a leading diamond industry lender, it had an estimated 20% inflation-adjusted return on equity in 1988. Australian textile magnates Joseph Brender and Samuel Moss reportedly have already contacted the government to buy Union. Others are likely to follow. ■

ware. Mentor went a different route (FORBES, *May 16, 1988*). It wrote proprietary software but bought off-the-shelf computers from Apollo Computer rather than develop its own. Mentor prospered. Valid and Daisy almost went out of business before they, too, switched to standard hardware.

Costello says the industry is about to change again, to one in which the user selects hardware pretty much independently of the software. Sun makes a hot box today. Tomorrow? The buyer doesn't want to be locked in.

Cadence's software is now available for use on workstations from Sun, Apollo and Digital Equipment. Versions for Hewlett-Packard, Sony and NEC machines will be available over the next year. Costello says his programmers can turn out a version for a new computer in three months, as long as the new computer uses a standard version of Unix, an operating system that facilitates portability.

Richard Steven Street



Verification of a chip design
Software to say, "Does it work?"

Cadence emerged as a serious competitor only last year, via the merger of publicly traded ECAD, Inc. and private SDA Systems, Inc. The stock market crash of 1987 got the ball rolling, by killing a planned public offering of SDA stock. Costello, who got a masters in physics from Yale and later was an R&D manager at National Semiconductor, was president of SDA Systems at the time. The founders of the two constituent companies remain at Cadence as cochairmen, but they let Costello run the business.

In a world still populated by what Costello calls dinosaurs, it's perhaps better to be a large mammal than a small one. Cadence recently paid $15 million or so of its stock to get Tangent Systems, another chip design software outfit, from Intergraph. In addition, Cadence raised $1.6 million in a public offering at 7⅞. The offering price increased the company's public float, since prior to the offering there were several large holders, including Harris Corp. with over 10%. Cadence started the year with $37 million in cash that will help it branch into systems design—that is, the overall architecture of, say, a computer or a telecommunications product. Currently Cadence's products are used exclusively in designing the chips that will be used within a system.

The company, however, is plenty glamorous on Wall Street, where at a recent 14 its stock goes for 24 times 1988 earnings and 14 times estimates for 1989. ■

If the market continues to sputter, 1989 will probably be a lousy year for underwriters of technology stocks but potentially a great year for buyers.

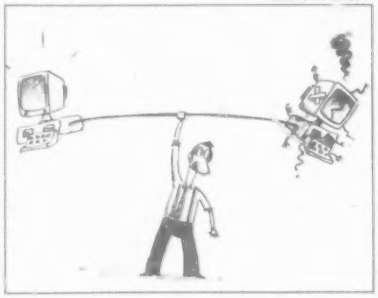
Computer stocks vintage 1989

By Richard A. Shaffer

INVESTING IN initial public offerings—especially the initial public offerings of technology companies—can be a frustrating and profitless experience for the unwary.

If you had put $1,000 in every computer-related IPO coming to market between Jan. 1, 1983 and Dec. 31, 1988, you would have invested $279,000. Your investment would be worth $295,000 today. Had you invested on the same dates in the S&P 500, you'd have $423,000 now (not counting dividends in either case). A sorry performance indeed, particularly considering the high risk and low dividends of new stock offerings. Three in four of the computer-related IPOs did worse than the S&P average.

Patrick McDonnell



This study, extracted from the FORBES database of 5,000 IPOs, covers only those offerings priced at $5 or higher and raising $5 million or more. Including the smaller stocks would have made the IPO numbers worse, since penny stocks account for a disproportionate share of the price manipulation and fraud and bankruptcy on Wall Street.

One big reason investors do poorly buying new issues is a matter of timing. New offerings tend to arrive at the peak of a market. The technology sector, for example, did spectacularly well in the first 12 months of the 1982-87 bull market. Into that frothy market came dozens of overpriced new stocks and thousands of naive investors trying to catch yesterday's success story. Under the circumstances, losses were inevitable.

There was wide variation in the results, however, so the astute or lucky investor could have done well. In 1983, the last big year for high-technology IPOs, the range in quality of the companies coming to market was considerable. On the plus side, there were Compaq, Lotus Development, Ashton-Tate and Stratus Computer. In the crash and burn column, there were SEEQ Technology, Automatix, TeleVideo Systems and Kaypro. And in between, a host of mediocrities.

Does all this mean the investor should refuse to touch new offerings?

Richard A. Shaffer is founder of Technologic Partners, a technology consulting company in New York City, and publisher of Technologic Computer Letter.

Winners

These firms turned in the best performances among 279 computer-related initial public offerings since January of 1983. They were truly exceptional: The group as a whole fared very poorly.

Company/business	Offer date	Offer price[1]	Recent price	Amount raised ($mil)	Performance versus S&P 500[2]
Adobe Systems/graphics softw	8/13/86	2¾	21¼	$5.5	548%
Cellular Communications/cellular	7/24/86	5	33	27.5	436
Autodesk/computer-aided designs	6/28/85	3⅝	29	15.4	418
Oracle Systems/relational databases	3/12/86	3¾	24	31.5	408
Sigma Designs/IBM compatibles	5/16/86	2⅞	15	5.75	315
Compaq Computer/IBM compatibles	12/09/83	11	69⅜	66.0	256
Microsoft/PC software	3/13/86	10½	46½	58.7	253
Metro Mobile Cts/cellular equip	10/31/86	11⅜	42½	41.7	222
Cook Data Services/oil & gas sftwr[3]	2/01/83	4	24½	10.4	199
Copytele/monitors	10/06/83	2⅝	13½	6.0	195
Octel Communication/voice msg	2/26/88	7	22⅜	14.7	187
Chips & Techs/semiconductors	10/08/86	5	16¼	10.0	163
First Data Res/computer svcs[4]	9/13/83	14	38¼	56.0	136
System Software/mainframe sftwr	2/12/87	8⅜	20½	17.6	123
3Com Corp/networking equipment	3/21/84	6	24⅜	12.8	122

Losers

Ranked by amount raised at the initial offering, these were the largest of the computer-related IPOs to declare bankruptcy. One was later purchased, but the other four all but wiped out the IPO buyer's investment.

Company/business	Offer date	Offer price	Recent price	Amount raised ($mil)
Victor Technologies/computer systems	3/23/83	280[5]	½	78.8
Eagle Computer/microcomputers	6/15/83	12	0	33.0
Equatorial Comm/communication devices[6]	9/13/83	14	3¾	30.8
Arrays/computer software	1/12/84	8	¼—	12.2
Columbia Data Prods/personal computers	1/18/84	11	0	12.1

[1]Adjusted for splits. [2]Percent by which ending value of an investment in IPO would have exceeded ending value of an investment in the S&P 500. [3]Sold software business and became Blockbuster Entertainment, a video retail chain. [4]Acquired by American Express. [5]Adjusted for 1-for-16 reverse split. [6]Acquired by Central Corp.

Sources: Technologic Partners, Forbes

Comp/Comm

Not at all. Buy at a time when no one wants technology stocks—when the underwriters have to cut prices to move the inventory—and you stand a decent chance of making money. In 1986, for instance, there were only 50 computer IPOs, and they have on average beaten the S&P 500 by 29%. Contrast that with busy 1983, when 108 issues came out and underperformed the market index by 52%.

This year is likely to be a so-so one for the people who are in business to sell high-tech IPOs, busier than 1988 but with nothing like the runaway conditions of 1983. Virtually every bulge-bracket investment bank has gone after high-technology underwriting in recent years and there hasn't been enough business to go around lately. There has also been little in the way of follow-on financings from young computer companies, whether in the form of subsequent equity issues or convertible debt. Only 10 debt issues have been offered in the last two years, and only 13 additional equity issues in the last three years. But if 1989 is a slow year for the investment bankers, it could shape up as a good year for discriminating buyers.

Relative to other securities, technology stocks have now recovered to precrash levels, a positive development for the IPO market. There are other signs of the beginning of a recovery as well. For example, Network General, a maker of software and hardware that analyzes computer networks, with revenues of $8.9 million and profits of $1.8 million for the nine months ended last December, not only was able to go public but sold above the range anticipated in the red herring. The stock is now up some 37%, despite the fact that the size of the initial offering was increased from 1.6 million to 1.9 million shares. BTU International, a semiconductor equipment manufacturer, was up 14% before returning to its $8 original offering price.

Good grades for the class of '88 add further appeal to the IPO market. The 22 computer-related companies that went public last year outperformed the S&P by an average of 25% in value between their offering dates and Mar. 20. That's partly because of issue quality. Consider the 65 computer-related companies that went public between 1984 and 1986 and raised at least $10 million. These companies were profitable for an average of four consecutive quarters before the IPO. The 20 $10-million-and-up companies in the class of '88 were profitable for an average of six consecutive quarters. The 1988 performance also was improved by low initial pricing.

As a result of the strong performance of these companies, expect to see at least as many technology companies come public in 1989 as in 1988, and possibly a few more. However, instead of the usual distribution of deals, with most bunched in the middle, the quality of companies that try to go out this year should be polarized between the good and the bad. And it shouldn't take too much looking to tell the difference.

What's more, prices on even the good companies will probably not be high, which should leave something on the table for investors with a medium- to long-term perspective. Companies that do go public will need several quarters of profits and a compelling story, or at least a reasonably interesting one. And they'll have to be willing to accept valuations that are modest in comparison to years past.

To compile our IPO forecast, we first examined hundreds of high-technology startups and analyzed each one for maturity and outlook. Using this case-by-case method, we identified 21 companies that are highly likely to go public this year.

If the market begins to take off, we have a separate list of startups that might take the plunge in 1989 instead of waiting for 1990, raising the total for the year to perhaps as high as any year since the frenetic 1983. What's more important, the average quality of the class of '89 is high, and some of the companies might generate sufficient enthusiasm to reignite the market for high-technology initial public offerings.

As we see it, the top five IPO prospects for 1989 are:

- MIPS Computer Systems, a maker of very high performance microprocessor chips and systems that use so-called reduced instruction sets;
- Claris, an Apple Computer subsidiary that owns the rights to MacWrite and MacPaint, among other products;
- Santa Cruz Operation [FORBES, *Oct. 31, 1988*], which develops applications software for the rapidly growing Unix market;
- Sybase, a relational database software company; and
- Radius, which makes add-on hardware for Apple's Macintosh.

MIPS sports good management, a great product and endorsements from DEC, NEC, Tandem Computers, and Siemens, among others. Sales are currently running at an annual rate of more than $100 million, though profitability is still in question. Competition in its fast-chip market is heating up, with new processors recently having been introduced by Intel, Motorola and Sun Microsystems.

Claris Corp. is perhaps the best-known name in its field of software for the Apple, but a number of questions still surround its eventual success. Has the company been profitable long enough? If free of Apple, would it begin selling software for the IBM family? Could it continue to develop new products of its own? One problem here is that Apple, which owns roughly 80% of the company, would probably continue to control it after the offering.

Less known but equally interesting, Santa Cruz Operation has Microsoft for an investor and expects annual revenues in the $100 million area. With Unix turning up on more and more desktops, this company is riding the wave. Valuation and timing could be a problem, given the recent Microsoft investment. Profits are also an issue. But this is definitely a company to watch.

We list Sybase as a "possible" for 1989, conditional upon a favorable market. Last year's sales were around $23 million, and the company's valuation based on the most recent round of private financing was $125 million. Sybase has momentum and, though the price is likely to be at the high end, the possibility of becoming the next Oracle. You'll find Oracle, another producer of database software, near the top of the 1983-88 roster *(see top table, p. 184)*.

Radius, which boasts 12% aftertax margins on $100 million in sales, makes enhancement products such as color monitors and graphics cards for Apple's Macintosh. The company has an excellent balance sheet, some good products and very heavy interest from investors.

In the generally losing class of 1983, two IPOs that beat the market—Ashton-Tate and Richardson Electronics—had P/Es of less than 25. Two of the worst performers—Eagle Computer and Victor Technologies—were losing money when they were brought public. Another good reality check on pricing is to look at similar companies that are already public. If public companies are trading with P/Es in the mid-20s and the IPO candidate is being offered in the mid-40s, ask yourself why an investor should pay a lot more for a smaller, riskier company. Are its growth prospects really that much better? ■

Forget those gloomy forecasts of a slowing computer industry. Entirely new computer industries are now emerging.

The next waves

An interview with Sanford C. Bernstein's Mark Stahlman

By George Gilder

IT'S FASHIONABLE TO wring hands over the maturing of the computer industry and the U.S. loss of competitiveness in computers. Fashionable and, in the informed opinion of Mark Stahlman, wrong. An analyst with the money management firm of Sanford C. Bernstein & Co., and a man with wide experience in the industry, Stahlman is a good deal more than a mere number-cruncher. Stahlman's views, while controversial, are respected and sought after. He was interviewed by Contributing Editor George Gilder.

Stahlman: The whole idea of a computer industry that is slowing down or maturing is absurd. It is like saying there is something called the wheel industry and that bicycles, motorcycles, toys and cars are just different markets for wheels.

Computing is a basic invention that is being applied to many industries, some of which are mature, like mainframes and minicomputers; some of which are maturing, like desktop personal computers; some of which are rapidly growing, like network computing; and some of which are too new to have mattered yet, such as mobile computing.

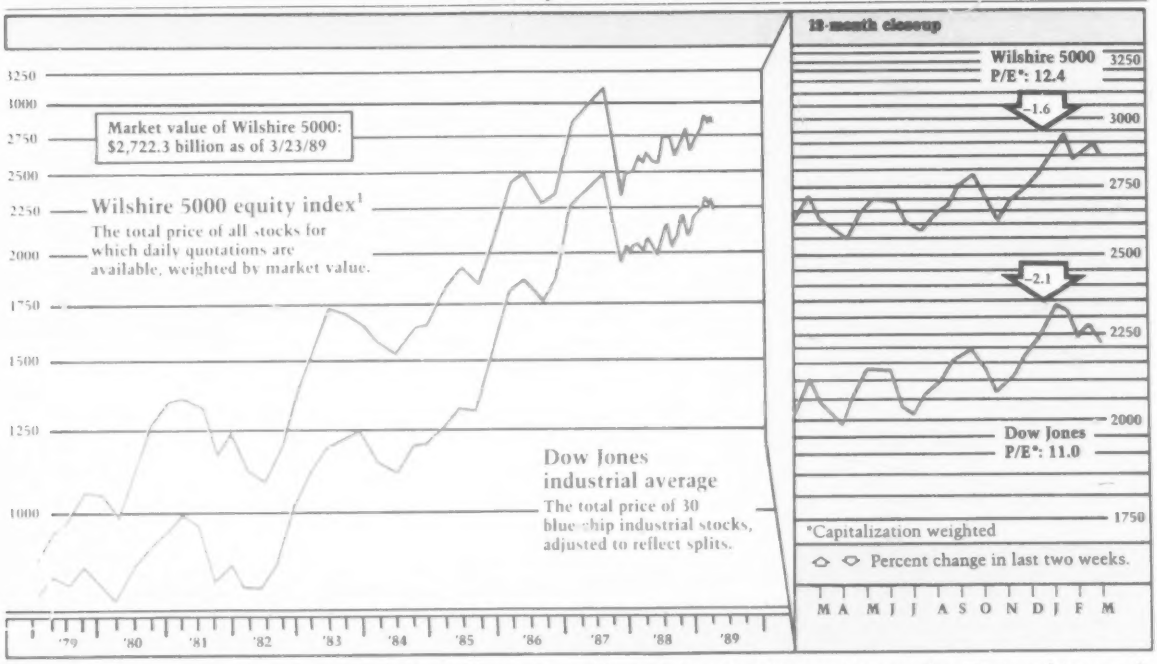
FORBES: Just a minute. The question is whether the overall set of industries applying this invention is maturing.

The computer business is entering a period of profound transformation. Everything before this is prehistory. History is beginning at this point. The total revenue expectation in my forecasts, for network computing and mobile computing by the end of the century, is $1 trillion.

Network computing, of course, involves powerful workstations connected to specialized accessories—from printers to database searchers. And mobile computing

The Forbes/Wilshire 5000 Review

Edited by Steve Kichen



Technology glitches. Although none of the Wilshire sectors advanced in the last two weeks, weakness in the technology group was especially notable. Slower sales and earnings for IBM, Digital Equipment and Intel helped drive down their combined market value by over $7 billion. Overall, high-market-capitalization stocks experienced the sharpest losses, the reverse of what usually happens in a big selloff. While the Dow declined 2.1%, the Nasdaq index fell only 1.2%. The investor yardsticks below profile activity over the past four weeks. During this stretch small-market-capitalization, high-P/E, high-growth and low-yield stocks performed much better than their more conservative counterparts.

The Dow, recently at 2243, stands at 11 times latest 12-month earnings. Right after the October 1987 crash, the Dow multiple was 16.6 and the Dow was almost 300 points lower. Either the current market is cheap or investors are worried that earnings have peaked.

Closeup On the Equity Markets

Performance of six leading indexes

Percent change	Wilshire 5000	Forbes 500[2]	Dow Jones industrials	NYSE Composite	Amex Market Value Index	NASDAQ Composite
in last 4 weeks	–0.8	–0.9	–2.0	–0.9	0.5	–0.5
in last 52 weeks	9.2	10.1	10.8	9.2	9.3	6.7

Stock performance based on six key investor yardsticks[3]

Percent change	Company size		Volatility[4]		P/E multiple		Dividend yield		Growth profile[5]		Share price	
	large	small	high	low	over 21	under 8	over 4.5%	none	high	low	over $34	under $4
in last 4 weeks	–1.2	2.6	1.4	0.1	0.8	–0.1	–1.2	2.3	1.4	0.1	–0.4	0.7
in last 52 weeks	10.4	11.8	7.3	4.4	21.3	9.6	–0.3	12.6	7.9	9.1	15.3	–3.8

[1]Wilshire index reflects price performance. It differs slightly from market value of outstanding stocks because of retirements of equity since index was created. [2]Based on sales. [3]Equal weighted indices containing all shares with market capitalizations over $10 million. [4]A stock's sensitivity to overall market movement. High-volatility issues have wide price fluctuations; low-volatility issues are more stable. [5]A quantitative evaluation of a stock's growth image, determined by Wilshire Associates.

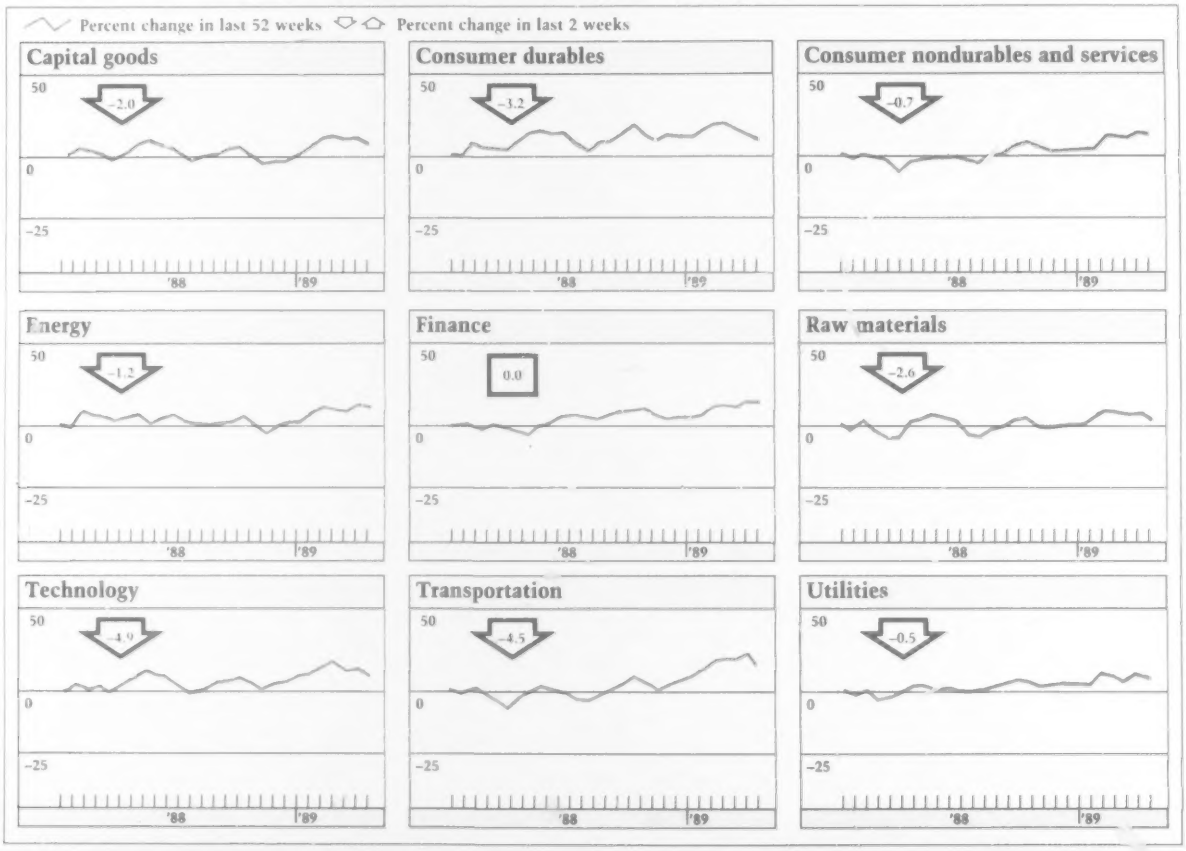
Note: All data for periods ending 3/23/89. Prepared by Wilshire Associates, Santa Monica, Calif.

Steven Kichen

Where the Action Is

Transports get a crude awakening. With oil prices reaching levels last seen before the 1986 collapse in oil prices, investors began shifting assets away from transportation shares and into energy. Texas Air, Federal Express, Northwest Airlines and Yellow Freight System, Inc. all declined more than 9%. Energy showed a two-week loss of 1.2% but a four-week gain of 2.1%, versus a 4% loss for the transportation sector.

Finance stocks were flat, all in all, but within the sector banks and brokerages moved in different directions. Some banks benefit from rising interest rates, and over the two weeks J.P. Morgan, Citicorp and Manufacturers Hanover rose more than 6%. Rising rates usually hurt Wall Street. Morgan Stanley, Shearson and Salomon lost over 7%.



What the Analysts Think

The consensus remains positive. A recession is not in the cards, to judge from the latest readings from Wall Street's analysts. Earnings estimates have been rising for consumer durables stocks, precisely those among the most likely to feel a downturn. General Motors' 1989 forecast was raised 2.7%, Ford's 2.2%.

Forecasting the Forbes Sales 500

Performance period	Average earnings per share	P/E
latest 12 months	$3.39	11.7
1989 estimates	3.96	10.0
1990 estimates	4.39	9.2

Rank based on change in estimate	Sector	Estimated 1989 EPS	Estimated 1989 P/E	% change in 1989 estimate in 2 weeks	% change in 1989 estimate in 4 weeks
1	Consumer durables	$5.13	9.8	0.71%	2.13%
2	Raw materials	3.46	8.9	0.43	1.01
3	Energy	2.87	12.2	0.40	1.14
4	Consumer nondurables	2.72	13.0	0.11	0.00
5	Capital goods	3.00	12.2	0.02	-0.13
6	Technology	3.19	10.4	-0.04	-0.88
7	Finance	3.73	8.1	-0.21	-0.27
8	Utilities	3.07	10.1	-0.27	-0.39
9	Transportation	2.78	10.2	-0.75	-1.14

Earnings projections are capitalization-weighted consensus estimates from over 3,000 security analysts. Data are compiled and updated continually by the Institutional Brokers Estimate System (IBES), a service of Lynch, Jones & Ryan, a New York-based brokerage firm.

Note: All data for periods ending 3/23/89. Prepared by Wilshire Associates, Santa Monica, Calif.; IBES, a service of Lynch, Jones & Ryan, New York.